

# **Sewer Cleaning Truck**

## **RFP No. 2014-7**



### **Lehi City Corporation**

### **Public Works Department**

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**RESPONSES ARE DUE PRIOR TO:**

**July 10, 2014**  
**5:00 PM MDT**

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*Preferred method is to submit electronically to:*  
[www.bidsync.com](http://www.bidsync.com)

*Responses may be mailed or hand-delivered to:*  
Lehi City Administration  
Attn: Robert Ranc  
RFP No. 2014-7  
153 North 100 East  
Lehi, UT 84043

**Lehi City Corporation  
Public Works Department**

**Sewer Cleaning Truck**

REFERENCE NUMBER: RFP No. 2014-7  
RFP TITLE: "Sewer Cleaning Truck"  
RFP LOCATION: Lehi City Corporation, Lehi City, Utah  
  
SUBMISSION DEADLINE: July 10, 2014  
SUBMISSION TIME: 5:00 PM MDT  
SUBMISSION PLACE: Lehi City Administration  
153 North 100 East  
Lehi, Utah 84043  
  
RFP DESCRIPTION: This is a bid for a sewer cleaning truck, heavy-duty class 8 chassis with conventional cab configuration. The truck shall be capable of cleaning, servicing, and maintaining storm and sanitary sewer lines, drains, catch basins, lift stations, and hydro excavations.  
  
RFP CONTACT: Jeremy Estes  
Fleet Manager  
(801) 768-7100 ext. 2719  
[jestes@lehi-ut.gov](mailto:jestes@lehi-ut.gov)

CONTRACTORS: Carefully read all instructions, requirements and specifications. Give all requested information properly and completely. Submit your proposal with appropriate supplements and/or samples. Please submit proposals through Bidsync.com or mail or deliver to the Lehi City Administration address above by the submission deadline. Proposals received after July 10, 2014 at 5:00 PM MDT will not be considered.

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Additional instructions for submitting proposal:

- A. It is the responsibility of the Contractor to "Log In" through BidSync. For assistance contact BidSync at 1-800-990-9339.
- B. Questions regarding this proposal should be submitted through BidSync. The Contractor may also contact Jeremy Estes, Fleet Manager (see "RFP Contact" above) for specific questions regarding the proposal content. RFP #2014-7 must be referenced on all proposals and

correspondence related to the RFP. Significant questions that arise subsequent to the issue of this RFP will be consolidated and answers will be provided to all Contractors on record as receiving this RFP. All questions should be received three (3) working days prior to RFP due date.

- C. The recommended method to submit your proposal is through BidSync. By using alternate methods of delivery, contractor bears all risks if documents are not received at the Administrative Office prior to the submission deadline. Contractor should call to verify Administration has received the hard-copy proposal prior to the RFP closing. If using an alternative method, Contractors may either mail or hand-deliver one (1) bound hardcopy and one (1) CD electronic copy to the Administration Office. Responses should be addressed as follows:

RFP #2014-7: Sewer Cleaning Truck  
Lehi City Administration  
Attn: Robert Ranc  
153 North 100 East  
Lehi, Utah 84043

Following the deadline, the names of those responding to the RFP will be made public. All other information will remain confidential, as required by law. (See Section 2.10)

Unless specifically authorized by the City's Administrative Office, telephonic proposals or modifications of proposals will not be considered. However, modifications by email, fax, etc. for proposals already submitted through the proper channels will be considered, if received prior to the time for the submission deadline.

## SECTION 1: PRODUCT REQUIREMENTS AND PROPOSAL PRICING

### 1.1 PRODUCT REQUIREMENTS

Lehi City is seeking bids for a sewer cleaning truck. The following is a description of the goods and services Lehi City will require:

- 1) **Sewer Truck:** See Section 4 for technical specification.
- 2) **Training:** The Bidder shall train operators in the complete operation of the equipment to the City's sole satisfaction. If the unit is a combination package, all subcontractors associated with the unit must be present for their portions of training. Bidder will assist Lehi City in the training of mechanics/operators for the repair of this equipment and shall supply Lehi City and/or mechanics with repair bulletins and/or manuals. Since Lehi City mechanics have basic skills, this training shall be more specifically applied to all special items on said equipment. The Bidder shall provide (at its cost) transportation, registration, lodging, and subsistence associated with the training. This will include up to two (2) technicians and two (2) Operators. The Bidder shall allow 30 days scheduling time for fleet management to schedule appropriate employees for training.

See Section 5 for the required training outline.

- 3) Miscellaneous Items:

**Documents to be presented at the time of delivery shall include the following:**

- One (1) title/registration application for each unit delivered.
- One (1) manufacturer's window sticker with price and option information. **Do not leave the sticker on the vehicle door glass.**
- One (1) dealer's invoice with a typed VIN, purchase order number, and dealer's stock number.
- One (1) manufacturer's "Statement of Origin" for each unit delivered with a typed assignment as follows:
  - One (1) certified weight slip for any unit that has had body modifications or body mounted to chassis, etc. The weight slip must reflect the tare weight and ***fully loaded weight***. FSS will reject any vehicle that will not legally load (GVWR) to specification.
  - One (1) list of parts (including price) required to perform yearly preventive maintenance inspections as well as routine maintenance.

**Items to be presented at the time of delivery shall include the following:**

- One (1) complete set of filters to be supplied (with each unit) for the complete vehicle including filters for all accessories and sub-assemblies.

**Documents to be delivered *prior to the delivery of the last unit* (delivery shall not be considered complete until the City is in receipt of the manuals) shall include:**

- Two (2) sets each of the parts illustration with part numbers manual, operator's manual, operators video, and service manual; in either book form or by CD (if available) shall be provided for each unit purchased by Lehi City. If multiple units are purchased, a **total** of only two (2) copies are needed per purchase.
- Two (2) sets of complete wiring schematics shall be supplied as a part of each manual. All schematics shall be clear and legible.
- Two (2) sets of line-setting tickets/cards shall be provided for each unit.
- One (1) set of vehicle operator, pre-trip inspection, and safety videos (if available) shall be provided.

If the vehicle is equipped with auxiliary equipment, two (2) sets each of the parts illustration with part numbers manual, service manuals, and video (if available) in either book form or CD (if available) shall be furnished with each system. The manuals and schematics supplied shall provide complete and comprehensive information on all equipment, equipment components, and accessories as supplied to comply with this specification. If changes, modifications, additions, or alterations of any kind are made on the equipment, the Bidder shall provide blueprints, line drawings, and descriptive text sufficient to allow one of average skill in general mechanics to diagnose, repair, and maintain the equipment and all components.

On equipment assembled from manufactured components, the parts manuals shall show the manufacturer of each part and all cross-referencing between the Bidder and manufacturer.

Lehi City shall have the right to reproduce any material for Lehi City's educational purposes only.

All books, CD's, and manuals shall be delivered to Lehi City *prior to delivery of the last unit*. Delivery shall not be considered complete until the City of Lehi is in receipt of all books and manuals.

Contractors should submit proposals by July 10, 2014 at 5:00 PM MDT. Proposal documents and specifications for RFP No. 2014-7, "Sewer Cleaning Truck," can be found online at [lehi-ut.gov/business/rfp-bid-solicitations/](http://lehi-ut.gov/business/rfp-bid-solicitations/) or on BidSync.com.

## **1.2 PROPOSAL PRICING**

The Contractor shall provide construction services that meet all qualifications as described in the Service Requirements above. The total cost for the Sewer Cleaning Truck as referenced above is:

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## **SECTION 2: INSTRUCTIONS TO CONTRACTORS**

### **2.1 ADMINISTRATIVE GUIDANCE**

The information provided in this RFP is designed to provide interested Bidders with sufficient information to submit proposals meeting minimum requirements, but is not intended to limit a proposal's content or to exclude any relevant or essential data therefrom. Bidders are at liberty and are encouraged to expand upon the specifications to give additional evidence of their ability to provide the services requested in this RFP.

### **2.2 SCOPE OF TERMS & CONDITIONS**

Before submitting a proposal, the Bidder shall understand all bid conditions referred to in this document, and any addenda issued before the RFP submission date. It shall be the Bidder's responsibility to ensure that the proposal includes all addenda issued prior to the RFP submission date. By submitting a proposal, the Bidder acknowledges and accepts the Terms and Conditions described herein.

### **2.3 PROPOSAL RESPONSE OUTLINE**

The Bidder must submit a complete and concise response to the RFP, demonstrating the ability to meet the requirements of this RFP. Pertinent supplemental information should be referenced and included as attachments. The contents of the proposal submitted by the successful Bidder may become part of any bid awarded as a result of this solicitation. All proposals must be organized to comply with the following sections:

#### **LETTER OF TRANSMITTAL**

The letter of transmittal should include an introduction of the Bidder, including the name, address, telephone number, and fax number of the person to be contacted, along with others who are authorized to represent the Bidder in dealing with this RFP. Any other information not appropriately contained in the body of the proposal should also be included in the letter of transmittal. The letter should also indicate any criteria expected by the City that cannot be met by the Bidder (see Detailed Discussion below). The transmittal letter should be signed by an authorized representative of the Bidder empowered with the right to bind the Bidder for the amounts estimated and terms proposed.

#### **DETAILED DISCUSSION**

This section should be the major portion of the proposal and must contain a specific response to each section in this RFP. Failure to provide written response to items indicated will be interpreted by the City as an inability by the Bidder to provide the requested service. The Bidder should include a detailed discussion should include the following:

1. The professional reputation & qualifications of the Bidder. Include a list of clients that you have provided sewer cleaning trucks (or similar products) for and the names and telephone

numbers of the contact person in those organizations. This list may include organizations from the public and private sector and from organizations inside and outside of Utah.

2. A list of all sub-contractors, including complete contact information, involved in the completion of the bid. ***Acknowledge that each sub-contractor must provide two (2) sets of parts/service manuals for items installed.***
3. Proposed timeline for product delivery.

## COST PROPOSAL

The Bidder must submit a cost proposal allowing costs to be evaluated independently of other criteria in the proposal. The cost proposal should be itemized and not just include a total price. The pricing for all products and services shall remain firm for the duration of the contract. No price changes, additions, or subsequent qualifications will be honored throughout the duration of the bid except with approved change orders. Pricing on all transportation, mobilization and other charges shall be prepaid by the Bidder and included in the proposal price. The Bidder must indicate any additional charges not mentioned above or forfeit the right to payment for such items.

## MISCELLANEOUS

The Bidder should provide any supplemental information and attachments relevant to the proposal, including samples, company literature, and catalogs.

### 2.4 PROPOSAL PREPARATION COSTS

Lehi City is not liable for any cost incurred by the Bidder associated with the preparation of the proposal or the negotiation of a bid prior to the awarding of the bid.

### 2.5 SUBSTANTIVE PROPOSALS

The Bidder certifies that, (a) the Bidder's proposal is genuine and is not made in the interest of, or on behalf of, an undisclosed person, firm, or corporation; (b) the Bidder has not directly or indirectly induced or solicited any other Bidder(s) to submit a false proposal; (c) the Bidder has not solicited or induced any other person, firm, or corporation to refrain or abstain from submitting a proposal; (d) the Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder(s) or over Lehi City; and (e) Bidder shall not violate or cause any person to violate the Utah Municipal Officers and Employees Ethics Act, or any other Federal, State, or Municipal law.

### 2.6 RESTRICTIONS

All proposals must clearly set forth any restrictions or provisions deemed necessary by the Bidder to effectively provide the proposed Bid.

## **2.7 PROPOSALS SHALL BE BINDING SUBJECT TO ACCEPTANCE**

Proposals shall be binding upon the Bidders for sixty (60) calendar days from submission deadline. A Bidder may withdraw or modify its proposal any time prior to the submission deadline by written request, signed by the same authorized officer or agent who signed the original proposal.

## **2.8 ADDENDUM TO THE RFP**

In the event that it becomes necessary to revise this RFP in whole or in part, an addendum will be provided to all Bidders on record as having received this RFP. A statement issued in an addendum shall have the effect of modifying a portion of the proposal documents when the statement in the addendum specifies a section, paragraph, or text, and states that it is to be so modified.

Any other communication, whether verbal or written, which are received by any representative of the Bidder from sources other than official addendum should be confirmed by the Bidder with the RFP Contact as being true and accurate prior to incorporating such information into its response. This refers to both formal and informal conversations and communications.

## **2.9 ALTERNATIVE PROPOSALS**

Bidders may submit more than one proposal, each of which must follow the Proposal Response Outline (Section 2.3 herein) and satisfy the requirements of this RFP. If alternative proposals are submitted, the Bidder must explain the reasons for the alternative(s) and its alternative's comparative benefits. Each proposal submitted will be evaluated on its own merits.

## **2.10 DISCLOSURE OF PROPOSAL CONTENT**

Under the Government Records Access and Management Act, Section 63-2-101 et seq., Utah Code Ann. (1993 and supp. 1996), as amended ("GRAMA") certain information in the submitted proposal may be open for public inspection. If the Bidder desires to have information contained in its proposal protected from such disclosure, the Bidder may request such treatment by providing a "written claim of business confidentiality and a concise statement of reasons supporting the claim of business confidentiality" with the proposal (GRAMA, Section 63G-2-309). Pricing elements of any proposal will not be considered protected. All material contained in and/or submitted with the proposal becomes the property of Lehi City and may be returned only at the City's option.

## **2.11 ACCEPTANCE TESTING – PAYMENT RETENTION**

Upon and after delivery, the City shall fully test each vehicle and component thereof in order to determine final acceptance (see Section 2.12). Such tests shall allow the City to completely and accurately assess whether each vehicle, including all parts, equipment, materials, and functions, meets the requirements set forth in the contract documents.

The City reserves the right to test each function more than once during this acceptance testing period. If the City finds a problem or failure with all or any part of a vehicle, the Bidder shall be obligated to replace, correct, or fix any problem or failure.



Should the City determine that the delivered vehicle be sent back to the Bidder to replace or correct any problem or failure, the acceptance-testing period is to be restarted upon subsequent delivery.

If a unit is sent back to the Bidder for warranty repairs the acceptance period is extended another until the unit successfully operates a full 30 days without required warranty repairs. The City shall provide payment in the amount of 90 percent of the Bidder's proposal pricing upon delivery. The remaining 10 percent shall be paid upon the City's determination that the goods and services provided hereunder are acceptable.

## **2.12 FINAL ACCEPTANCE, TESTING**

Final acceptance shall be evidenced by the City's written certification to Bidder that all vehicles, parts, and components have been successfully delivered and installed by the Bidder, are operational and inspected and accepted by the City. The acceptance of such items shall be based on the items meeting, to the satisfaction of the City, the acceptance standards set forth in the contract document.

The items provided under this contract document shall meet all of the following standards:

- 1) All components shall be in good working order and operational upon Final Acceptance.
- 2) All components shall be supplied from Bidder.
- 3) All model and/or parts shall consist of the highest quality materials.
- 4) All components shall be in good, undamaged condition.

The vehicle(s), to pass the final acceptance test, must operate free from defects during the test. "Free From Defects" means that the vehicle(s) operates in accordance with requirements set forth in, or delivered pursuant to, the specification.

## **2.13 TRANSPORT**

The Bidder shall be fully responsible for the transport of the equipment to and from Lehi City Fleet Division, 439 West 300 North Lehi Utah for installation and correction of items or workmanship not in compliance with the specification. The Bidder shall be responsible for any loss of or damage to Lehi City property while such property is in Bidder's possession and/or subject to Bidder's control.

## **2.14 WARRANTY**

- A. All equipment purchased on this bid shall be purchased from one (1) Bidder. That one Bidder shall be fully responsible for all warranty performance relating to the vehicle, as well as any part or component of the purchased equipment, regardless of who installed the component.
- B. The Bidder's responsibility shall include all warranty involving a Sub Contractor.
- C. The Bidder shall supply at least a 36-month warranty on all parts and workmanship on chassis and vocational body and equipment, from final acceptance as reported by the Lehi City Fleet Division. The Bidder shall further guarantee the vehicle / equipment supplied complies with all applicable State/Federal laws and regulations in effect at the time of delivery.
- D. Transmission shall have an Allison extended five (5) year, 200,000 mile warranty.

- E. Engine, injectors, injector pump, and turbo warranty shall be for five (5) years or 200,000 miles with a \$0 deductible. No deviation accepted.
- F. Cab warranty shall be a minimum of five (5) years, unlimited mileage, and shall cover all forms of material failure to include fastener and hinges.
- G. The Bidder shall state in writing any additional duration of their warranty that goes above and beyond the minimum requested warranty stated in C above. This shall include any applicable limitations or conditions.
- H. All Bidders must have an *manufacturer-authorized* warranty dealer who can perform warranty repairs within a 50-mile radius of Lehi City Fleet Division, 439 West 300 North, Lehi, Utah 84043. If no authorized dealer is available and Lehi City Fleet Division *chooses* to purchase necessary equipment, Lehi City Fleet Division may perform the warranty repairs during the term of warranty agreement.
- I. The Bidder will establish Lehi City, Fleet Division, as a warranty repair station. The City will repair only items that would cause unnecessary downtime. All large engine and transmission warranty repairs will be referred to the Bidder for resolution in a timely manner. The Bidder will reimburse the City for all repairs at a rate of \$85.00 per hour. Lehi City Fleet Division will make all repairs using only genuine O.E.M. parts, except at those times when O.E.M. parts are not available within a reasonable time. In that case, Lehi City Fleet Division will use parts equal to O.E.M.
- J. All sublet repairs will be billed to the Bidder by Lehi City Fleet Division.
- K. Warranty claim payment will be made by the Bidder to: Lehi City Fleet Division, 439 West 300 North Lehi, Utah 84043. Payment will be submitted within 30 days from receipt of invoice.
- L. Bidders must attach any proposed additional terms or conditions for warranty claims. See Section 6.

## **2.15 BRAND NAMES OR EQUAL**

The brand name or equal specification used in this solicitation is for the purpose of describing the standard of quality, performance, and characteristics desired and are not intended to limit or restrict competition. Any bid that proposes equal quality, design, or performance will be considered if the product offered is identified in the bid (including sufficient technical information) and determined by Lehi City Fleet Division to be equal in all material respects to the brand name product referenced in the bid. Decisions of functional equivalency will be at the sole interpretation and discretion of Lehi City.

## **2.16 WORKMANSHIP**

Vehicles shall be free from defects that may impair their serviceability or detract from appearance. The following description contains, but is not limited to, workmanship standards that the City will use to judge each proposal.

- A. Whenever dissimilar metals are used, they shall be insulated against corrosive action.
- B. All components will be new. Defective components shall not be furnished. Parts, equipment, and assemblies that have been repaired or modified to overcome deficiencies shall not be furnished without the approval of Lehi City. Component parts and units shall be

manufactured to definite standard dimensions with proper fits, clearances, and uniformity. Welded, bolted, and rivet construction utilized shall be in accordance with the highest standards of industry. General appearance of the unit shall not show any evidence of poor workmanship.

- C. Lehi City retains the right to reject any bid, as well as the successful bidder's performance, due to poor quality of workmanship. Reasons for rejection include, but are not limited to:
- a. Rough, sharp, or unfinished edges, burrs, seams, corners, and joints.
  - b. Non-uniform panels. Edges not radiused, beveled, etc.
  - c. Paint runs, sags, orange peel, "fish eyes," etc., and any other imperfection or lack of complete coverage of paint or coatings.
  - d. Body panels or components that are uneven, unsealed, or contain cracks, dents, or voids.
  - e. Misalignment of body fasteners, glass, viewing panels, light housings, other items with large or uneven gaps, spacing, etc., such as doors, body panels and hinged panels.
  - f. Improperly fabricated and routed wiring or harnesses and electrical connections.
  - g. Improperly supported or secured hoses, wiring harnesses, mechanical controls, etc., including interference with other components.
  - h. Interference of chassis components, body parts, doors, etc.
  - i. Leaks of any gas, vacuum, or fluid lines (air conditioning, coolant, oil, oxygen, etc.)
  - j. Noise, panel vibration, etc.
  - k. Inappropriate or incorrect use of hardware, fasteners, components, or methods of construction.
  - l. Incomplete or improper welding, riveting, or bolting.
  - m. Lack of uniformity and symmetry where applicable.
  - n. Loose, vibrating abrading body parts, components, subassemblies, hoses, wiring harnesses, or trim.
  - o. Improper body design or interface with the chassis that could cause injury during normal use or maintenance and fail to provide access to perform routine or mandatory repairs or maintenance on the vehicle's electrical and mechanical systems, in addition, the improper combination of options that (by their combination and installation) are inherently incompatible with regard to function or safety.
  - p. Sagging, non-form-fitting upholstery or padding, holes, tears, discoloration, etc.
  - q. Incomplete or incorrect application of rust proofing.
  - r. Visual deformities and equipment malfunction.
  - s. Unsealed appurtenances or other body components, gaskets, etc.
  - t. In addition to those items listed above, any deviation from specification requirements or any other item (whether or not stipulated herein) that affects form, fit, function, finish, durability, reliability, safety, performance, or appearance shall be cause for rejection.

## **SECTION 3: PROPOSAL EVALUATION**

### **3.1 EVALUATION PROCESS**

All proposals in response to this RFP will be evaluated in a manner consistent with Lehi City policies and procedures, and Utah State Procurement Code 63g-6a-101, et seq. and all applicable rules, regulations, and policies.

In the initial phase of the evaluation process, the evaluation committee will review all proposals timely received. First, non-responsive proposals (those not conforming to RFP requirements) will be eliminated. Second, the remaining proposals will be evaluated in a cursory manner to eliminate from further consideration those proposals, which in the judgment of the evaluation committee, fail to offer sufficient and substantive provisions to warrant further consideration. Each Bidder bears sole responsibility for the items included, or not included, in the response submitted by that Bidder. Lehi City reserves the right to disqualify any proposal that includes significant deviations or exceptions to the terms, conditions, and/or specifications in this RFP.

At the conclusion of this initial evaluation phase, selected proposals will be chosen for detailed review and evaluation. Lehi City reserves the right to be the sole judge as to the overall acceptability of any proposal or to judge the individual merits of specific provisions within competing offers.

### **3.2 EVALUATION CRITERIA**

Lehi City will judge the merit of all proposals received in accordance with the general evaluation criteria listed below. Failure to provide any of the information requested may result in the proposal being removed from further consideration. In evaluating the proposals, the City will consider:

1. Workmanship
2. Availability/Timeframe
3. Cost

### **3.3 AWARD OF Bid**

Upon completion of the evaluation process, Lehi City may negotiate with and award the bid to the Bidder whose proposal is determined to be most advantageous to the City, as determined by the evaluation criteria discussed above. AWARD OF CONTRACT MAY BE MADE WITHOUT DISCUSSION AFTER PROPOSALS ARE RECEIVED. Accordingly, each proposal should be submitted with the most favorable price and service available. The contract will incorporate the provisions of this RFP (including any addenda).

### **3.4 RIGHT TO REJECT**

The City reserves the right to reject any and all proposals and to waive any formality in the proposals received, to accept or reject any or all of the items in the proposal, and award the contract in whole or in part, if it is deemed in the City's best interest. The City reserves the right to

negotiate any and all elements of the proposals, if any such action is deemed in the best interest of the City.

## SECTION 4: TECHNICAL SPECIFICATION

### ONE 2015 OR NEWER

**HEAVY DUTY, CONSTRUCTION GRADE, 6x4 TRUCKS EQUIPPED WITH A SEWER AND CATCH BASIN CLEANING SYSTEM (64,000 GVWR), ONE (1) STEER AXLE AND TWO (2) DRIVE AXLES. TRUCK SHALL BE ENGINEERED FOR USE IN BOTH A HIGHWAY MAINTENANCE AND UTILITIES APPLICATIONS**

1. This specification is intended to describe and set minimum acceptable standards for a heavy duty, construction grade, 6x4 truck equipped with sewer and catch basin cleaning system. The truck shall be capable of:
  - Cleaning and vacuuming debris and sediments from sewer lines and catch basins
  - Hauling 10 yards of material in dump body
  - Ejecting loaded dump body

Unit(s) shall be new (unused), *latest* standard production model completely serviced and prepared for customer delivery by a factory-franchised dealer prior to delivery. Unit shall include all warranty identification cards furnished to the trade in general in accordance with standard warranty policy. Unit shall include the line production sheet listing all components. The line production sheet shall match the vehicle's serial number.
2. The dimensions, capabilities, weights, and gauges stated in the written bid. **Specifications are to be considered nominal** unless otherwise stated as minimum, maximum, or exactly for specific strength, fit, or purpose. Where brand names are mentioned (with or without model numbers), bidders are to understand that brand names OR equal in performance, quality, and function is intended.
3. All equipment associated with this purchase must be delivered to Lehi City no later than 220 days from order date. The Lehi City Fleet Division may authorize an extension of the delivery date.
4. Liquidated damages in the amount of \$100 for each normal workday (Monday through Friday) shall be levied against each piece of equipment that is delivered after the established delivery date. Officially recognized state and federal holidays will not be considered normal working days. Such sum will be owed as estimated actual damages and not as a penalty. The amount of liquidated damages is fixed, and is considered reasonable due to the impracticability and extreme difficulty in ascertaining the true value of damages the City will incur as a result of untimely performance by BIDDER NAME. Lehi City will deduct such damages from the Bidder's invoice before making payment, and if such funds are insufficient to pay these liquidated damages, Bidder shall pay the amount of the difference to the City.

Specification	Meets	Explain Deviation
<b>CHASSIS</b>		
The basic chassis design shall be 6x4, diesel powered with conventional cab. <b>The GVWR shall be spread over three axles and legally load to 64,000 lb.</b> The manufacturer will use the federal/state bridge formula and axle-loading laws to determine the maximum legal weight allowed. The wheelbase, cab to axle and axle to end of frame overhang dimensions shall be engineered to provide the best possible weight distribution, maximize the legal payload the truck can carry and ensure that over-all length is kept to a minimum		
<p>Recommended Dimensions (bidder may change dimensions to achieve max. legal weight distribution):</p> <p>WB: 220"</p> <p>CT: 156"</p> <p>AF: 96"</p> <p>BBC: 107 min. - 112" max.</p> <p>GVWR: 64,000 lb.</p>		
The GVWR shall be identified in the cab or on the door as the final complete certification label		
A Bridge law, loaded max weight decal shall be located inside the cab within the drivers line of sight.		
Please reference steering section for turning diameter requirements.		
Vendor to provide wheelbase of truck bid:_____		

Specification	Meets	Explain Deviation
<p>Vendor to provide maximum gross weight in compliance with Bridge Law. The City of Lehi has determined the following models are acceptable in the planned application of this equipment:</p> <p><b>Mack GU713</b></p> <p><b>International 7400</b></p> <p><b>Or equivalent</b></p> <p>The City has determined that the:</p> <ul style="list-style-type: none"> <li>• <b>Super Products Camel (Model 200)</b></li> <li>• <b>Vactor (Model 2100)</b></li> <li>• <b>Vacall (Model AllJetVac P Series)</b></li> </ul> <p>Sewer &amp; catch basin cleaning system meets the intent of this specification</p> <p>Other models bid, as equivalency, shall submit documentation of equivalency in both performance and design with this bid.</p>		
Note: Contractor will confirm Vehicle GVWR by providing (tare) weight slips, weights must be verified on certified scales prior to acceptance of the vehicle and payment of the invoice.		
<b>FRAME AND RELATED ITEMS</b>		
Heat-treated, high tensile 3/8" alloy steel, (120,000 PSI yield)		
<p>C-channel reinforcement, (120,000 PSI yield)</p> <p>Full length of frame. HD C-channel center cross members</p>		
RBM, 2,500,000 <i>nominal</i>		
Two <u>front</u> tow hooks, frame mounted.		
Huck-Spin round-collar frame fasteners.		



CHASSIS FASTENERS		
Chassis and cross members to be assembled using grade 8 huck bolt chassis fasteners (if sufficient room for a huck gun is lacking, bolts may be substituted. Where bolts are used the warranty stated below prevails.		
If the cross members are not fasted with huck bolts, all cross members shall be warranted for five years against becoming loose, cracking or experiencing any other failure and shall require no scheduled maintenance.		
FRONT AXLE & EQUIPMENT		
Front Axle: 20,000 lb. capacity. (Identify wheel cut, maximum must be installed)		
Leaf Springs: 20,000 lb. capacity, refuse rated, tapered-leaf. Shock Absorbers: Heavy-duty.		
Oil Lubricated Hubs: Stemco Guardian w/removable rubber plugs or Chicago Rawhide wet type.		
REAR AXLE & EQUIPMENT		
Rear Axles: Arvin Meritor single reduction, 46,000-lb capacity w/driver controlled differential Inter-lock and lube pump. 200 wheel ends. (Axle shafts shall have a <i>minimum</i> of 2.25" diameter at the spline.)		
Hubs shall be steel, aluminum hubs are not acceptable.		
Positive lock, all-wheel drive on tandem		
Hendrickson Haulmaxx 46,000-lb. suspension is <i>preferred</i> .		
Rear differential ratio: vehicle will be used in refuse can-to-can pickup. To increase vehicle productivity, rear ratio will be set to allow quick acceleration from stop. Although a top speed of 65 mph is desired, City will accept a top speed of 60 mph to increase acceleration. Vendor to state differential make, model, gear ratios, and top speed of configuration offered.		
Differential Make:		

Differential Model:		
Differential Ratio:		
Top Governed Speed:		
Startability in first gear shall be 25% minimum on flat dry level commercial asphalt or concrete.		
Gradability shall be met at GVWR with all accessories operating. The propulsion system and drive train shall enable the vehicle to achieve and maintain a speed of 40 mph on a 2-1/2% ascending grade and 7 mph on a 16% ascending grade. Requirements shall be met on grades with flat dry level commercial asphalt or concrete		
<b>BRAKES</b>		
Dual air ABS Brake System w/spring loaded type parking brake		
Front Brakes: 16.5" x 6" Q+ S-cam type air brakes with 24" chambers. Linings shall be Meritor #4715		
Rear Brakes: 16.5" x 7" Q+ S-cam type air brakes with two 30/30 chambers on forward rear axle and two 30" service brake chambers on rear axle. Spring brakes on all four. Linings shall be Meritor #4718		
Automatic slack adjusters front & rear.		
Air Compressor: 15 cfm <i>minimum</i> w/external air filter.		
Air tanks of maximum capacity shall be provided.		
Location of tanks shall provide maximum ground clearance by mounting them inside of the frame flanges. All air supply valves shall be frame mounted.		
Air Dryer: Bendix or equal. Dryer will be equipped with auto moisture ejector valve, and replaceable spin-on desiccant cartridge filter.		
Air system plumbed to ensure that the primary air supply tank is filled before the secondary tanks.		

All air tank drains shall be ran to a common manifold equipped with a drain valve within reach and easily accessible by operator. This manifold drain will need to be colored International Orange and marked to be drained in accordance with the manufacturer's specifications.		
<b>STEERING &amp; MANEUVERABILITY</b>		
Left Hand Drive (conventional position)		
Dual Power Steering: TRW or Sheppard dual power.		
Power steering reservoir shall be mounted to allow access from ground level. <b>NO DEVIATION</b>		
Wheel cut will be 45 degrees <i>preferred</i> . Maximum wheel cut will be adjusted before delivery.		
The chassis turning diameter (wall to wall) not to exceed 80 feet (total) maximum.		
Tilting steering column.		
Steering Wheel: smallest available		
Vendor to state maximum wall-to-wall turning diameter offered:  <i>Turning diameter will be verified prior to acceptance of each vehicle.</i>		
<b>TRANSMISSION</b>		
An Allison RDS4500, six-speed transmission with lockup converter. Transmission must be supplied with high capacity fluid reservoir and "Transsynd" synthetic transmission fluid.  <i>Transmission shall have an Allison extended 5-year, 200,000 mile warranty.</i>		
The transmission dipstick shall be assessable from the ground and without tilting the cab.		
Electronic shift pad control shall accommodate right hand drive installation.		
An electronic oil level indicator shall be incorporated into the transmission shift pad.		
Cruise control shall be deactivated.		
Transmission cooler must be Allison approved. Cooler shall be located outside the engine compartment and not in front of the main radiator		

PTO - Transmission take-off. Muncie Direct-Drive Model 39828-25-M3. The PTO shall be set to disengage automatically at 1,800 rpm and to engage only below 1,000 rpm. The preferred hydraulic system will operate at maximum pressure/flow at engine idle.		
<b>DRIVELINE</b>		
Mainshaft: 1810 series Dana-Spicer w/full round end yokes.		
Interaxle shaft: 1760HD Dana-Spicer w/full round end yokes.		
<b>ENGINE</b>		
The truck shall be powered by a liquid cooled, computer controlled, 4 cycle, diesel engine rated at a <i>minimum</i> output of 365 brake horsepower and capable of producing a <i>minimum</i> of 1150 foot pounds of torque. The engine shall meet or exceed all applicable emission standards in place at the time of assembly. <i>The engine must be able to run all the hydraulic functions to normally operate the truck while at idle. Engine, injectors, injector pump, and turbo warranty to be 5 year or 200,000 miles with \$0 deductible. NO DEVIATION.</i>		
The crankcase shall be fitted with a tap-type valve from which oil samples can be taken, this tap shall be mounted near the middle of the oil pan for easy access. Fumoto valve or equal.		
Vendor to state:		
Engine Make:		
Engine Model:		
Engine Rating: _____hp _____torque @ _____RPM		
B-20 compatible? Yes___ No___		
Cooling system shall be <b><i>manufacturer's maximum</i></b> possible system for engine/chassis combination. The cooling system must be capable of maintaining safe operating temperature in a refuse pick-up, stop-pickup-go continuous style application in ambient temperatures as high as 120 degrees F.		
Radiator – single radiator shall be provided, straight core is preferred.		

Coolant shall be an "extended life" coolant to -34F degrees.		
If the cooling system is equipped with an overflow surge tank, the tank must be metal construction and mounted in a location that does not obstruct the driver's view through the rear window. Sight glass must be visible from ground level without raising the cab.		
There shall be a screen installed in the front of the radiator to filter out debris. Screen to be removable without the use of tools.		
Fan: Horton or Kysor 2-speed automatic on/off-type fan drive. Fan clutch design shall cause the clutch to lock up and continue cooling, not fail in freewheeling mode.		
Air Cleaner: Dry element type with reserve capacity exceeding maximum engine requirements incorporating centrifugal type pre-cleaner with automatic dirt ejector. An air restriction gauge mounted at cleaner assembly and must be readable from outside the truck while standing on the ground. Service indicator: Donaldson model RBX00 2351 (20" H20) or equal. Dual element filter (inner & outer) with bolt on cover.		
Starter Motor: Delco 41MT or equivalent		
Governor: Variable speed electronically controlled.		
Silicone radiator and heater hoses or Gates Blue Stripe (EPDM) with approved clamps.		
Electronic engine controls shall include safety shutdowns with both audible and visible warning indicators for:		
High coolant temperature - warning and shutdown.		
Low coolant warning—audible/visual; no shutdown.		
Low oil pressure—warning and shutdown.		
An Allison SCAAN performance data computer analysis indicating the engine/drive train and tire combination being offered meets performance requirements shall be provided with the bid.		
Engine Brake Required		

All air, oil and fuel lines, except for the compressor discharge line, shall be flexible Aeroquip.		
<b>EXHAUST</b>		
The exhaust system shall be horizontal mount under chassis system. Exhaust components must be properly supported and guarded to prevent accidental contact by air/hydraulic lines, operator, or servicing personnel.		
Vertical exhaust and muffler (left side) shall have exhaust guard. Exhaust outlet with curved tip-out (directed street side) shall be shielded to prevent trash contacting the hot tail pipe.		
Exhaust, including muffler and stack shall be placed as far from the rear of the cab as possible to reduce heat transfer to cab.		
Active exhaust regeneration to be done at road speed only.		
Five minute engine shut down timer to allow turbo to cool down.		
<b>ELECTRICAL (BATTERY &amp; GAUGES)</b>		
Alternator: 12v. Leece Neville 200 Amp. <i>minimum</i>		
Alternator and electrical system shall maintain the batteries at idle and in gear with all accessories and lights operating.		
Batteries: Delco, series 1150 or equal, 12 volt High Cycle.		
Batteries: parallel connected, stud type battery post to provide ample power storage to supply all electric and electronic accessories.		
Batteries: <i>minimum</i> of three (3) batteries required with the maximum reserve capacity and cold cranking amps available.		
Number of Batteries: _____ Reserve Capacity of each: _____ Cold Cranking Amps each: _____ Total Cold Cranking Amps: _____		
Starter ground wire shall be directly connected to the battery terminal. Fusible link shall be used for secondary grounding of cab, chassis, and engine.		

Battery cables: sealed terminal design.		
Battery shut-off switch mounted near batteries, easily accessible.		
Battery box shall be frame mounted		
Circuit breaker type switches shall protect all electrical circuits; fuses are acceptable <b>only</b> for radios and printed circuit boards requiring precise circuit protection not available through circuit breakers.		
All non-factory (OEM) electrical panels shall be Wired-Right design (no exceptions) and all circuits must be designed with a 50% reserve capacity over rated load.		
Air Horn: One (1) with single pedestal mounting under hood.		
Radio: AM/FM stereo with CD and clock.		
Halogen headlamps w/daytime headlight system.		
Intermittent windshield wiper switch.		
Indicator: Low engine oil pressure w/light & buzzer		
Indicator: water temperature w/light & buzzer		
Indicator: Park brake w/light		
Indicator: Air cleaner restriction(If OEM not available an inside gauge will need to be added)		
Indicator: ABS indicator w/light		
Indicator: Inter-axle differential lock w/light		
Gauge: Speedometer / Odometer, dash mounted.		
Gauge: Tachometer, dash mounted.		
Gauge: Air pressure, dash mounted		
Gauge: Coolant temperature, dash mounted		
Gauge: Engine oil temperature, dash mounted.		
Gauge: Engine oil pressure, dash mounted.		
Gauge: Engine hour meter (electronic through ECM), dash mounted.		

Gauge: Fuel, dash mounted		
Gauge: Volt/amp meter, dash mounted.		
<b>FUEL TANK</b>		
Single left (street) side tank--80 gallons. Fuel tank shall not interfere with mounting of Ancillary equipment. Shall be equipped with an easy accessible manual shut-off valve. <b><i>Fuel tank must be full at time of delivery</i></b>		
Fuel/Water Separator: shall be a Fleet Guard or Racor appropriately rated for the engine's fuel demand. Filter must be located in a location that is easily accessible for maintenance. All fuel system components must be compatible w/B-20 biodiesel		
<b>PAINT</b>		
<b>Cab &amp; Chassis:</b> White		
<b>Wheels:</b> White		
<b>Chassis frame:</b> Black Powder Coat		
<b>Front bumper:</b> White		
<b>Tool Boxes:</b> White		
The City of Lehi will provide and/or approve the paint scheme after award of the bid.		
<b>TIRES &amp; WHEELS</b>		
The wheels shall be steel hub-piloted (9x22.5), 10 hole, Accuride or equal. Powder coated white to match chassis.		
All tires shall be Michelin and <i>sized and rated to meet the bridge formula for maximum legal payload and safety.</i>		
Front Tire (2): 315/80R22.5 Michelin XZUS, load range L, 20 ply minimum.		
Rear Tire (8): 315/80R22.5 Michelin XZUS, load range L, 20 ply minimum.		



CAB & EQUIPMENT		
Maximum engine compartment insulation (min. R-12) to reduce noise and heat in the cab The noise level shall not exceed the OSHA standard of 85 decibels at 60 mph at 1900 rpm (assuming that the engine is governed at 2,200 rpm). <i>Cab warranty shall be a minimum of 5 years, unlimited mileage and shall cover all forms of material failure to include fasteners and hinges.</i>		
Windshield: Conventional one piece.		
Windshield shall have factory tint.		
Dual electric windshield wipers, Variable speed with delay		
Storage pouch or glove compartment.		
Insulated headliner with dome light.		
Air conditioning – Factory, dash		
Air ducts shall direct air to the upper and lower extremities, one driver-side, one center cab, and one passenger-side <i>minimum</i>		
A/C ducts shall be kept clear of blockages such as switches and lift controls		
Interior Color: Gray or Graphite.		
Seat Belts: 3-point style (color shall be red, orange or yellow – high visibility)		
Two visors to be hinged in such a manner to provide shade to both the windshield and the side windows.		
Radio: AM/FM stereo radio w/clock. Two speakers installed in the headliner		
12-volt accessory plug (to be mounted in center of cab below dash or on center console)		
Dual west coast style mirrors shall be Moto Mirror Plus, (or equivalent) 16" x 7" retractable with 8" convex mirrors on each side. <i>All mirror mounts shall include anti-vibration bracing.</i>		
Driver: Hi-back seat ( <i>preferred</i> , mid-back acceptable), Heritage (179959FN31) Air, Black Tuff-Tex, w/2-way adjustable lumbar		

Seat shall be mounted so as to provide the maximum rearward adjustment.		
A coil type air hose, with blowgun located and plumbed to air system, inside the cab, behind the driver's seat, for blowing out debris. A stowage hook or holster shall be fabricated to store the blowgun and keep it from moving about the cab. The air pressure must be regulated to a maximum of 30 psi.		
Fire extinguisher, 5 lbs. UL listed, multi-purpose ABC dry chemical and approved mounting bracket.		
Roadside reflector kit, three reflectors per kit Mfg: James King & Co., model 1005, to include storage box with mounting bracket		
<b>CHASSIS LIGHTING</b>		
Manufacturer's standard lighting (exterior and interior) shall conform to FMVSS 108.		
Refer to Item #1 "General Technical Specifications" for details		
<b>ADDITIONAL ELECTRICAL &amp; LIGHTING</b>		
One (1) Target Tech #415611-02SB Turbo Beam 2000 2ft. light bar shall be installed by the contractor on a bracket/mount welded behind the cab and centered laterally on the chassis centerline. One (1) Target Tech #415611-02SB Turbo Beam 2000 2ft. light bar shall be installed by the contractor on a bracket/mount welded on the rear and top of the debris body. The lights shall be wired to come on with a manual switch. The two-position control switch shall be an illuminated rocker style and <i>located on the cab center console</i> and marked "OFF" & "ON" from top to bottom in a vertical manner. A warning light will illuminate whenever the beacons are on.		
One (1) front mounted 25' retractable cord hand held spot light for use in lighting inside manholes		

Two (2) adjustable work lights shall be installed at the rear of the debris body; one on each upper corner, lights shall adequately illuminate the rear work area. The lights shall be wired to come on with a manual switch. The two-position control switch shall be an illuminated rocker style and <i>located on the cab center console</i> and marked "OFF" & "ON" from top to bottom in a vertical manner. A warning light will illuminate whenever the beacons are on.		
One (1) National Signal, LED, Model 100, 25 light, 60" x 30" Type B directional arrow board shall be installed at the top of the debris body door. The top the arrow board must not extend more than 12 feet above the ground. The arrow board shall be wired to come on with a manual switch and have the following programmable provisions: <ul style="list-style-type: none"> <li>• Flash</li> <li>• Right Arrow</li> <li>• Left Arrow</li> </ul> The controls shall be an illuminated, <i>located on the cab center console</i> and marked "FLASH," RIGHT & "LEFT" from top to bottom in a vertical manner. A warning light will illuminate whenever the arrow board is on.		
Tail, Brake and Reverse lights shall be mounted (at legal height) outside the frame rails. All stop/tail/turn lights shall be LED.		
Add-on lighting must be separately switched with switches conveniently located and controlled from a central control console/panel in the cab.		
Switches must be properly labeled		
Back Up Alarm: A variable decibel, non-adjustable, back up alarm shall be installed.  Front and Back camera.		
<b>HYDRAULIC SYSTEM</b>		
The hydraulic system shall have a rated working pressure not to exceed 2,800 PSI		
The system shall be protected by an adjustable relief valve, to limit hoist and packer pressures to 2,400 PSI		
Hydraulic fluid temperature shall not exceed 180F. degrees		

A hydraulic fluid cooler shall be installed and will be mounted in such a way that it shall not adversely influence the surrounding components, with regard to temperature or physical interference and to avoid possible damage to cooler.		
The hydraulic reservoir must be of sufficient capacity to independently supply both the packing mechanism and mechanical lifting devices simultaneously (preventing cavitation) and still provide adequate cooling while operating in 120F. Degree ambient temperature and meeting the specified performance requirements. The hydraulic tank must be mounted in a location that will allow safe access for servicing. The tank must be equipped with a ball shut off valve in the pump suction line located as close to the tank and easily seen and accessible.		
The tank shall include a pressure cap, breather filter; clean out cover, magnetic plug, oil level sight glass and thermometer.		
The hydraulic system shall be protected by a 10-micron, in tank, return line filter, and a 100 mesh reusable suction screen.		
The hydraulic reservoir is extremely heavy. The framework and brackets that support the reservoir shall be single piece brackets that support it from underneath. NO BUTT WELDS OR SPOT WELDS. All seams shall have full welds. Tank shall be constructed of 10 ga. pickled & oiled steel and pressure tested for leaks. Tank shall include O-ring porting where possible. Mounting hardware, SAE grade 8. No welding to frame.		
The return line filter shall be replaceable without draining the hydraulic tank. The return line filter shall include a by-pass monitor in the cab to visually alert the operator to a by-pass condition.		
The tank must have quick disconnect fittings for filtration purposes. One Parker H8-63 male quick disconnect fitting with 1"female pipe thread must be located at the top and one at the bottom of the tank.		
Hydraulic hoses: steel reinforced, double wire braided, shall be used throughout where flexible lines are necessary. External spiral, or equal, guards shall be used where rubbing or chafing may occur. All hoses must be protected against any abrasion that may cause premature failure.		

The hoses shall be sheathed with an abrasion resistant fabric sleeve material Mfg: Weatherhead model A-390X to contain oil spray in the advent of a hose rupture.		
All metal lines shall be steel hydraulic tubing with JIC flared fittings. Metal lines will be securely clamped to prevent vibration and abrasion. Bulkhead fittings will be used whenever lines pass through the body.		
All hydraulic hose and line clamps, ("Hydrazorb", etc.), shall be secured using self-locking nuts or spring washers.		
Appropriately rated filters are required in both the suction and return lines of the hydraulic system. Spin-on type filters are preferred. Alternate filtration will be considered if data provided indicates equal to or better filtration than preferred system.		
The hydraulic system must have a conveniently located test port in both the packer and loader circuits. The vendor must seal (wire shut) the pressure relief valves at the recommended settings. Two removable 3,000 psi, glycerin filled pressure gauge must be provided with this contract.		
Quick disconnect fitting must be installed at all test port locations to allow the connection of test equipment without the use of tools or removing hydraulic lines and fittings		
If Hydraulic Controls are air operated, they must be equipped with a combination filter/lubricating system.		
<b>HYDRAULIC - PUMP</b>		
<p>The preferred hydraulic pump shall be cast iron and be manufactured by Commercial Shearing, Inc. or equal. The pump must meet system requirements and must be direct mounted to the PTO.</p> <p>Vendor to state:</p> <p>Hydraulic Pump Make:_____</p> <p>Hydraulic Pump Model:_____</p>		

The pump shall be capable of providing full function and full productivity to the hydraulic system with engine at idle RPM. Emergency pump shut off switch shall be dash mounted to turn off the pump in the event of hydraulic leaks etc.		
<b>HYDRAULIC - PTO</b>		
Direct drive, flange mounted PTO driven pump with oil recirculation for on/off operation.		
<b>HYDRAULIC - CYLINDERS</b>		
All cylinder rods shall have superior quality chrome plating or nitro-carbonized finish. All cylinders shall be bolted in place on cold rolled steel pins. Welding of cylinder pins is not acceptable.		
Cylinders shall be constructed with screw-on cups to lock glands in place. Seals shall be manufactured from Disogrin seal material. If multi-stage cylinders are used, chevron type packing is required.		
NOTE: Vendor is requested to supply a separate sheet attached to this bid with the part numbers and purchase price for each hydraulic cylinder and pump used on this vehicle. Purchase price quoted must be honored for a 12-month period.		
<b>HYDRAULIC SYSTEM - INSTALLATION</b>		
All tapered threaded fittings shall be installed using an anti-seize thread-sealing compound. Teflon tape is not acceptable.		
Hoses shall be routed for easy tracing of hoses and shall be protected with grommets when passing through bulkheads. Hoses shall be protected from abrasion when routed over or through bare metal edges.		
Hydraulic hoses shall be supported with metal hose clamps that provide protection for the hose from the metal portion of the clamp. Hoses shall not be allowed to droop or to be entangled with other hoses or lines. The clamps shall be spaced not more than 18 in. apart.		
Overhanging weight of fittings, hoses, valves, or piping shall be supported from the reservoir to eliminate flexing of sidewalls.		

<p>All hoses shall be routed and installed in accordance with the requirements and recommendations of SAE J1273. Special attention to routing and installation shall be given to avoid the following:</p> <ul style="list-style-type: none"> <li>• Tensile loads on the hose</li> <li>• Side loads</li> <li>• Flattening</li> <li>• Kinking</li> <li>• Thread damage</li> <li>• Damage to sealing surfaces</li> <li>• Abrasion</li> <li>• Twisting</li> <li>• Exceeding minimum hose bend radius</li> </ul>		
<b>HYDRAULIC SYSTEM - TESTING</b>		
<p>The hydraulic system and hydraulically driven components shall be operated and checked for leaks and proper operation. The operational test shall include the maximum requirements (height, extension, speed, etc.) of the driven devices. No leakage is permitted beyond a class "1" leak in accordance with SAE J1176-External Leakage Classifications for Hydraulic Systems.</p>		
<b>DEBRIS TANK</b>		
<p>The debris tank shall have a usable capacity of 10 cubic yards <i>MINIMUM</i> and shall be fabricated ¼" <b><i>Stainless Steel and/or Galvanized</i></b>. All tank seams shall be welded on both sides.</p>		
<p>The tank shall be equipped with a full width opening hydraulically controlled tailgate, which is completely sealed to prevent any leakage. The latching mechanism shall be hydraulically controlled. Two safety support rods, (one on each side of the tailgate) shall be provided. Each rod must be capable of supporting the entire weight of the tailgate.</p>		
<p>The debris tank shall have two, 6" butterfly style drain valves. The first valve shall be located in the tailgate and will have an 18" standpipe to allow the draining of excessive liquids while retaining the solids in the debris tank. Ten feet of lay-flat style hose with quick coupler and appropriate storage shall be provided. All drain valves will be painted International Orange.</p>		

The tank shall have an exterior liquid level gauge that can be easily seen from the driver or operator's position. A stainless steel ball check valve must be provided on the tank, which will automatically shut off the vacuum when the tank is filled to maximum capacity.		
The dump method shall be a full-length ejection system. All controls for raising the tailgate and discharging the load must be located on the driver's side, directly behind the cab. The tank must have an integral high pressure flushing system to clean the tank after dumping. An auxiliary wash handgun with <i>powered reel</i> is to be provided. The handgun hose shall be ½" with a pressure rating of 2,000 psi and be a minimum of 50 feet in length.		
<b>WATER SYSTEM &amp; TANKS</b>		
<p>Water storage tanks with a minimum usable capacity of 1,500 gallons must be provided. The tanks must be located in a position to provide the best weight distribution in a fully loaded condition. Must carry a minimum 10 year warranty. Each tank must be easily accessible for inspection and maintenance.</p> <p>Please provide the following information on the tanks bid:  Number of tanks_____</p> <p>Capacity of each tank_____</p> <p>Warranty years_____</p> <p>Replacement cost each_____</p>		
The water fill system must have a minimum 4" air gap on the fill tube to prevent siphoning of water from storage tanks back into the hydrant. The fill point shall be located on the curbside and must have a 2 ½ " NSF female swivel connector. A filter screen, of 80 mesh, must be installed in a location which is easily accessible for maintenance. A 30' water fill hose must be provided.		



The compactor shall be designed and constructed of material sufficient to ensure no distortion or bending occurs during repeated compaction cycles to maximum packing pressure. It shall be of adequate size to clear the hopper of all material dumped from 35 through 100-gallon containers in one sweep cycle. The sweep cycle time shall be 12 to 14 seconds maximum at all operating temperatures with an empty body. Either packer plate or paddle type design is satisfactory. The compactor plate or paddle must be designed so refuse will not cling to the packing device when it returns to the stored position.		
A control valve shall be installed which interconnects the debris tank and water tanks to permit filling all tanks with fresh water for jetting operations. The valve configuration must allow for water to be drawn from all tanks simultaneously. A drain valve must be located at the lowest point of the system for complete drainage. All drain valves will be painted International Orange.		
Water level sight gauges shall be provided. Sight gauges shall be visible from the operator's station along both sides of the unit. A low water alarm light is to be mounted in control console. The light shall illuminate when the water level drops to 25%.		
<b>FLUSHING SYSTEM WATER PUMP</b>		
The water pump shall be a high pressure, positive displacement pump. The pump shall provide continuous water flow and pressure. A minimum flow rating of 0-80 G.P.M. at 2,000 PSIG (Variable water flow adjustable from 20 – 100 PSI) must be provided. Double acting, single piston pumps must include accumulators to prevent surge. The pump must be mounted in a location that provides easy access for maintenance and protects the pump when traveling over rough terrain.		
A pressure relief valve must protect the pump. The pump must be also be capable of running dry for a period of 10 minutes minimum without causing damage to the pump.		
A dipstick or sight glass must be provided and easily accessible to check the oil level for the water pump.		

The pump will be powered by PTO. The pump must be capable of working independently or simultaneously with the vacuum system.		
Controls for engaging the pump and varying the flow rate must be located at the operator's station.		
List the following information concerning the water pump being offered: Make_____		
Model_____		
Warranty_____		
Replacement Cost_____		
<b>VACUUM SYSTEM</b>		
The vacuum pump shall be of the positive displacement design that allows maximum vacuum at all engine speeds. The vacuum pump shall be driven from a transmission mounted PTO. Vacuum rating to be a minimum of 3,300 CFM at 200" of negative water column.		
The vacuum pump must have a cleanable and reusable stainless steel air filter located between the debris body and the vacuum pump. Entry into the debris body shall not be required to clean the filters or screens.		
Dual controls for the vacuum system are required. One set of controls shall be at the operator's station and the other remote set shall plug into a receptacle on the operator's console.		
To prevent overload or "freewheeling" of the vacuum system, two vacuum relief valves shall be installed to allow air to enter into the system whenever maximum vacuum is exceeded		
Shall include pleated filter assembly to filter incoming air to blower assembly.		

List the following information concerning the vacuum pump being offered: Make_____		
Model_____		
Warranty_____		
Replacement Cost_____		
<b>HOSE REEL ASSEMBLY</b>		
The hose reel assembly shall be mounted at the front of the truck. The reel assembly shall be manually operated and shall have the ability to tilt forward and rotate to both sides. Access to the chassis engine shall not be obstructed. The tilt function of the hose reel must lock in place with pins. Control for the tilt function must be located close to these pins.		
The reel shall have a capacity of 1000 feet <i>preferred</i> (800 feet minimum) of 1" hose. 800 feet <i>preferred</i> (600 feet minimum) of 1" plastic sewer hose which meets MSWMA standards and rated at a minimum of 2,500 PSIG working pressure and 6,000 PSIG burst pressure shall be provided.		
Front mount 50' retractable hose for handgun, hydro excavating wand		
Direction and speed of the reel shall be hydraulically actuated and controlled from the operator's console.		
Two hose counter must be provided. Digital and Analog.		
Operator protection must be provided to prevent operator injury in case of a hose rupture or break.		

OPERATOR CONTROL STATION		
<p>An operator control panel shall be located at the <b><i>front of the vehicle</i></b> near the hose reel assembly. The control panel shall house, as a minimum, the following gauges and controls. All switches and controls must be illuminated for nighttime operations.</p> <ul style="list-style-type: none"> <li>• Engine kill switch</li> <li>• Engine tachometer</li> <li>• Engine throttle control</li> <li>• Body overload alarm light</li> <li>• Telescope and swing functions of boom</li> <li>• On/Off switch for boom mounted work lights</li> <li>• On/Off switch for sewer flushing system</li> <li>• Hose reel speed and direction control</li> <li>• Tilt and rotation controls for hose reel</li> <li>• Receptacle for boom remote pendant control</li> <li>• Vacuum gauge</li> <li>• Pressure gauge for jet cleaner pump output.</li> </ul>		
<p>The control console shall be a NEMA 4. All electrical connections shall require no exposed wires or terminals. All light bulbs shall be shock mounted to eliminate bulb failure. All wiring shall be color-coded. Sealed terminal boxes must be provided. A computer generated electrical schematic, specific to this vehicle, must be provided with the maintenance manuals.</p>		
BOOM AND HOSE ASSEMBLIES		
<p>A hydraulically actuated overhead boom assembly (<b><i>with heavy duty reinforcement to tube/boom section</i></b>) is required. The boom must be rated at 1,000 lbs minimum and capable of lifting approximately 8' vertically and have a minimum reach of 14' from the centerline of the truck. The boom must also be capable of telescoping an additional 5 feet minimum. A boom rest, located behind the cab, must be provided for support whenever the boom is not in use.</p>		
<p>The boom must be capable of hydraulically rotating a minimum of 90° in either direction (180° total) and be lockable in any position. An electrical system shall be provided which is capable of returning the boom to the stowed position in case of an engine failure. <i>Wireless remote control preferred</i></p>		
<p>Swing and telescoping functions of the boom must be capable of being actuated by wireless remote. The wireless remote must be able to run the hose reel function, water pump including pressure, with emergency shut off, and vacuum relief.</p>		

Boom hoses shall be heavy-duty reinforced <b>8" rubber</b> and especially designed for this type application. 6" reducer, 6" suction tube extensions, which connect to the flexible boom hose, shall be constructed of aluminum. The tubes must be connected by means of a quick connect type clamp. A storage rack must be provided for all extension tubes (side mounted <i>preferred</i> ) but rear configuration is acceptable. If the top of any tube is over 7' from the ground level, the rack must be capable of <i>hydraulically</i> lowering to provide safe and easy access to the extension tubes.		
Dual, boom mounted, work lights shall be provided. A switch located on the operators pedestal mounted console will control the lights.		
<b>STORAGE</b>		
The unit is to be equipped with 2 locking aluminum storage boxes <i>minimum</i> (under chassis, frame mounted). These boxes must be as large as possible based on mounting location. Preferred mounting location is one per side or both on curb side. A third storage box is preferred, to be equipped with 1" nozzle rack.		

ACCESSORIES		
<p>The following accessories must be provided upon delivery:</p> <ul style="list-style-type: none"> <li>• Remote grease fittings</li> <li>• <i>Hydraulically</i> operated tube rack.</li> <li>• Flexible lower hose-guide with rope</li> <li>• 6" X 7' aluminum intake tube with clamp and connector</li> <li>• 6" X 5' aluminum tube extension with clamp and connector</li> <li>• 8" to 6" aluminum reducer with 6" clamp and connector</li> <li>• 6" X 4' aluminum tube extension with clamp and connector</li> <li>• 6" X 3' aeration tube with clamp and connector</li> <li>• 15° radial nozzle with hardened orifice</li> <li>• 35° radial nozzle with hardened orifice</li> <li>• Quick connection operators suction tube handle</li> <li>• 10' X 1" 3M flexible starter hose</li> </ul> <p><b><u>Bid as Options</u></b></p> <ul style="list-style-type: none"> <li>• Nozzle kit- grenade/bomb nozzle, penetrating chisel point nozzle, floor cleaner/dredger nozzle, spinning/rotor nozzle, chain nozzle</li> <li>• Finned nozzle extension</li> <li>• Hydro Excavation kit – handgun, with extensions and nozzles for hydro excavating</li> <li>• Side mounted debris shovels, clam shovels</li> </ul>		
AUTHORIZED WARRANTY REPAIR STATION		
<p>The Contractor will establish the City of Lehi, Fleet Services Department as a warranty repair station. The City will repair only small items that would cause needless downtime. All large warranty repairs will be referred to the Contractor for resolution in a timely manner. The contractor will reimburse the City for all repairs at \$85 per hour</p>		
CONCLUDING DETAILS		
<p>Please carefully review all the details of the boilerplate before completing the bid submittal.</p>		

## SECTION 5: TRAINING OUTLINE

### **TECHNICIAN TRAINING**

1. Technical Manuals
2. Vehicle Familiarization
  - a. Description of systems and components
  - b. Maintenance services and lubrication
  - c. Vehicle operation
  - d. Warranty specification and requirements
3. Engine (if equipped)
  - a. Operation
  - b. Maintenance services and lubrication
  - c. Tune-up
  - d. Engine controls (manual, electronic), if equipped
  - e. Shut-down, computer controls, troubleshooting, if equipped
  - f. Cooling system
  - g. Oil filtration system
  - h. Ignition system (diagnosis, repair and troubleshooting)
  - i. Fuel system (diagnosis, repair and troubleshooting)
  - j. EFI/PFI, if equipped
4. Transmission (if equipped)
  - a. Description of systems and components
  - b. Operation
  - c. Maintenance services and lubrication
  - d. Service requirements (proper method and intervals)
  - e. Controls (manual, electronic, if equipped)
  - f. Integrated emergency warning system
  - g. PTO (operation, maintenance services, repair and troubleshooting), if equipped
  - h. Split shaft PTO operation, if equipped
5. Brakes and Air Supply System
  - a. Description of systems and components
  - b. Operation
  - c. Maintenance services and lubrication
  - d. Service requirements (proper method and intervals)
  - e. Repair and component replacement (brakes and air system)
  - f. Warning devices and troubleshooting
  - g. Anti-lock system if equipped
6. Body and Components
  - a. Lubrication and service requirements
  - b. Adjustments (compartment doors, lids and covers)
7. Hydraulic Systems (if equipped)
  - a. Description of systems and components
  - b. Operational controls (manual, electronic and automatic sequencing)
  - c. Maintenance services, repair and lubrication
  - d. Troubleshooting
  - e. System diagnosis
8. Complete Electrical Components
  - a. Troubleshooting and repair

## **OPERATOR TRAINING**

1. Vehicle Familiarization
  - a. Description of systems and components
  - b. Maintenance services and lubrication
  - c. Vehicle operation
2. Engine (if equipped)
  - a. Operation
  - b. Engine controls (manual, electronic), and shut down
3. Transmission (if equipped)
  - a. Description of systems and components
  - b. Operation
  - c. Controls (manual, electronic, if equipped)
  - d. Integrated emergency warning system
  - e. PTO (operation, maintenance services, repair and troubleshooting), if equipped
4. Brakes and Air Supply System
  - a. Description of systems and components
  - b. Operation
  - c. Maintenance services and lubrication
  - d. Service requirements (proper method and intervals)
  - e. Warning devices and troubleshooting
  - f. Anti-lock system if equipped
5. Body and Components
  - a. Lubrication and service requirements
6. Hydraulic Systems (if equipped)
  - a. Description of systems and components
  - b. Operational controls (manual, electronic and automatic sequencing)
  - c. Maintenance services, repair and lubrication.



**SECTION 6: ADDITIONAL WARRANTY INFORMATION (IF NECESSARY)**

COMPONENT	HOURS	MONTHS	MILES	COST
ELECTRICAL				
BATTERY				
ALTERNATOR				
STARTER MOTOR				
ENGINE				
COOLING SYSTEM				
ENGINE ACCESSORIES				
FAN CLUTCH				
EXHAUST				
FRAME				
FUEL SYSTEM				
INSTRUMENTATION				
LIGHTING				
PAINT				
STEERING				
POWER-STEERING PUMP				
GEAR BOX				
HYDRAULIC CYLINDERS				
SUSPENSION FRONT				
SHOCKS				
SUSPENSION REAR				
SHOCKS				

<b>COMPONENT</b>	<b>HOURS</b>	<b>MONTHS</b>	<b>MILES</b>	<b>COST</b>
TIRES				
TRANSMISSION				
WHEELS				
AIR CONDITIONING				
HEATING				
AXLE FRONT				
DRAG LINKS				
SEALS				
TIE RODS				
BEARINGS				
BRAKES				
ABS				
AIR COMPRESSOR				
AIR DRYER				
AIR SYSTEM				
AIR TANK				
BRAKE CHAMBERS				
BRAKE LINING				
CALIPERS				
DRUMS/ROTORS				
HYDRAULIC SYSTEM				
MASTER CYLINDER				
PARKING BRAKE				
SLACK ADJUSTERS				

COMPONENT	HOURS	MONTHS	MILES	COST
WHEEL CYLINDERS				
CAB				
CHASSIS				
CLUTCH				
DRIVE LINE				
CENTER BEARING				
U-JOINTS				

## SECTION 7: BIDDER SIGNATURE

### SIGNATURE OF BIDDER

Upon acceptance of this RFP, the undersigned agrees to complete all required work as described in this RFP document according to the terms and conditions described herein.

***By*** \_\_\_\_\_

***Title*** \_\_\_\_\_

***Address*** \_\_\_\_\_

\_\_\_\_\_

***Date*** \_\_\_\_\_